

CLAIMS

What is claimed is:

1. A valve assembly for a low pressure mold assembly comprising:
 - a port to a mold assembly;
 - a coupler for receipt of a mix head;
 - a fluid flow passage from said coupler to said port; and
 - a piston which is substantially rectilinear in cross-section, said piston movable within said fluid flow passage along a first axis between a first position which allows flow from said coupler to said port, and a second position which seals said port.
2. The valve assembly as recited in claim 1, wherein said piston is substantially square in cross-section.
3. The valve assembly as recited in claim 1, wherein said port includes a port end portion which is angled relative to said first axis.
4. The valve assembly as recited in claim 3, wherein said piston includes a piston end portion which is angled relative to said first axis.
5. The valve assembly as recited in claim 1, wherein said fluid flow passage includes a first flow passage along said first axis and a second flow passage substantially perpendicular to said first axis.
6. The valve assembly as recited in claim 5, wherein said second passage includes a first second passage portion within said coupler head, and a second, second passage portion within the mix head.

7. The valve assembly as recited in claim 5, further including a second piston movable within said second flow passage.

8. The valve assembly as recited in claim 7, wherein said second piston is substantially circular in cross section.

9. The valve assembly as recited in claim 7, wherein said fluid flow passage includes a third flow passage which communicates with said second flow passage in a substantially perpendicular relationship.

10. The valve assembly as recited in claim 9, wherein said second piston is movable between a first position which allows flow from said third flow passage to said second flow passage and a second position which prevents fluid flow from said third flow passage to said second flow passage.

11. The valve assembly as recited in claim 1, further including a lock assembly within said coupler, said lock assembly engageable with the mix head.

12. A low pressure mold assembly for receipt of a mix head comprising:
a port to the mold assembly;
a coupler for receipt of the mix head along a mix head axis;
a fluid flow passage from said coupler to said port, said fluid flow passage including a first flow passage defining a first axis and a second flow passage substantially parallel to said mix head axis; and
a piston substantially rectilinear in cross-section, said piston movable within said passage along said first axis between a first position which allows flow from said coupler to said port, and a second position which seals said port.

13. The mold assembly as recited in claim 12, wherein said piston is substantially square in cross-section.

14. The mold assembly as recited in claim 12, wherein said port includes a port end portion which is angled relative to said first axis.

15. The mold assembly as recited in claim 14, wherein said piston includes a piston end portion which is angled relative to said first axis.

16. The mold assembly as recited in claim 12, wherein said second passage includes a first, second passage portion within the mix head, and a second, second passage portion within said coupler.

17. The mold assembly as recited in claim 16, further including a second piston movable from said first, second passage portion to said second, second passage portion.

18. The mold assembly as recited in claim 12, further including a second piston movable within said second flow passage.

19. The mold assembly as recited in claim 18, wherein said second piston is substantially circular in cross section.

20. The mold assembly as recited in claim 12, wherein the mix head includes a third flow passage which communicates with said second flow passage in a substantially perpendicular relationship.

21. The mold assembly as recited in claim 20, wherein said second piston is movable between a first position which allows flow from said third flow passage to said second flow passage and a second position which prevents fluid flow from said third flow passage to said second flow passage.

22. A low pressure mold system comprising:

- a mold assembly;
- a port to the mold assembly;
- a coupler for receipt of a mix head along a mix head axis said coupler including a first flow passage defining a first axis substantially perpendicular to said mix head axis;
- a piston which is substantially rectilinear in cross-section, said piston movable within said passage along said first axis between a first position which allows flow from said coupler to said port, and a second position which seals said port
- a locking assembly for removably attaching said mix head to said coupler; said mix head including a second flow passage substantially parallel to said mix head axis; and
- a second piston movable within said second flow passage.

23. The valve assembly as recited in claim 22, wherein said mix head includes a third flow passage, said second piston movable between a first position which allows flow from said third flow passage to said second passage and a second position which prevents fluid flow from said third flow passage to said second flow passage.

24. The mold assembly as recited in claim 22, wherein said piston is substantially square in cross-section.

25. The mold assembly as recited in claim 22, wherein said port includes a port end portion which is angled relative to said first axis.

26. The mold assembly as recited in claim 25, wherein said piston includes a piston end portion which is angled relative to said first axis.